

Choosing a LinkShare Tracking Solution

Choice is good, but it is easy to be overwhelmed by too many options. This paper will provide you with the information you need to select the right LinkShare tracking option for your business, as well as what is required to implement each solution.

Three Categories of Options

LinkShare's tracking options fall into three categories – LSTrans, a script-based file transfer; and Browser-based options (Pixel and JavaScript Tracking) and Web Service tracking (GET and Post).

All these options include security measures to assure that it is actually your site reporting transactions and not someone trying to commit fraud. Most notably, LinkShare Browser-based and Web Services tracking options use MD5 hashing with private keys to protect partners.

Security

The MD5 hash is a commonly used cryptographic function for checking the integrity of data transfers. By sharing a private key, LinkShare can readily create a matching hash to the one provided by the advertiser to validate the source of the data received. If the LinkShare created hash for the received data does not match the hash contained in the transfer, the data will be considered suspect. As long as the keys are hard to guess and kept private, this solution provides a sound means of preventing the acceptance of faked data.

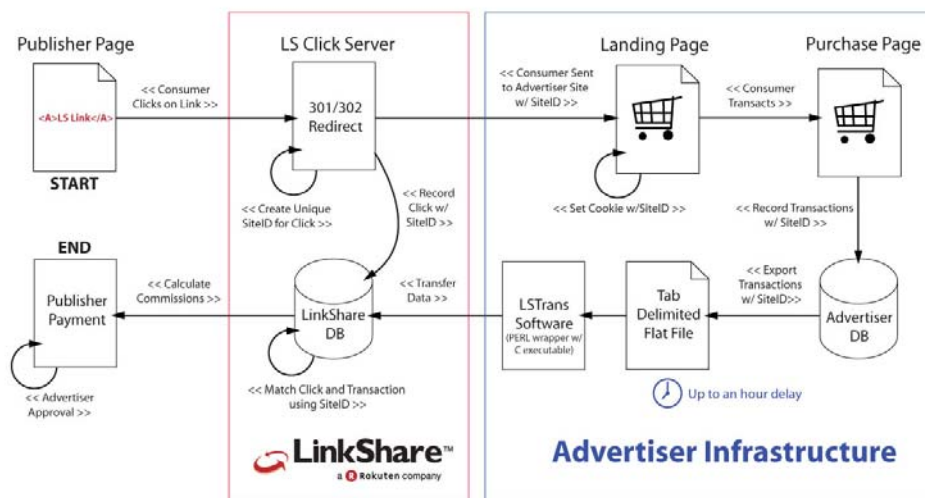
LinkShare's two preferred methodologies are LSTrans and web services, since both these methods embrace a full enterprise solution for tracking. These methods will assure the safest transfer of information while handling the richest amount of SKU data. For clients wanting a more real-time solution instead of batching, web services is the strongest approach, but it does require some sophistication on the part of an advertiser's technical team to implement.

Tracking Options at a Glance

The choice of which option to use will be particular to your team's comfort with the technology underlying each solution and your business model.

TRACKING METHOD	ENTERPRISE LEVEL TECHNOLOGY	EASILY RESOLVE MISSING TRANSACTIONS	ABILITY TO PASS RICH SKU DATA	ABILITY TO HANDLE CANCELLATIONS	INSTALLATION METHOD	TRACKING
LS Trans	■	■	■	■	Proprietary LS Script	Batch
Web Services	■	■	■	■	Web Service Data Transfer	Real Time
Pixel					Pixel	Real Time
JavaScript					JavaScript	Real Time

LSTrans Tracking



LSTrans Tracking

Existing merchant partners of LinkShare should be familiar with this proprietary tracking solution, which was developed to provide the greatest accuracy of transaction tracking for our advertising partners. Until now, this was the only option available through LinkShare to track transactions driven by affiliate publishers.

This method uses a PERL wrapper script and a C executable file installed behind the advertiser's firewall, which transfers batches of transaction records written by the advertiser to a tab delimited flat file.

The lifecycle of transaction using LSTrans starts with a consumer clicking on a LinkShare enabled link placed on a publisher site. This link contains the information necessary to understand which publisher site sent the click, what creative drove the click, and where to deliver the consumer upon redirection to the merchant site. The link will direct the user's browser to LinkShare's click server, which will record the information contained in the link and then send the consumer to the landing page on the advertiser site via a 301 or 302 redirect.

As part of that redirect, the URL for the advertiser's landing page contains a parameter called SiteID, which is an encoded unique identifier for that click. The merchant is required to capture the SiteID and associate it with the consumer using a cookie until the return days expire or another publisher referral occurs to trump the first.

When a publisher-driven sale occurs, the merchant will record that sale in a flat file with the SiteID captured earlier for that consumer's click. The LSTrans script will then open up a SSL connection to LinkShare and transmits the data as a batch. This is normally done hourly. Advertisers using this script behind a firewall will need to open up a port to allow the script to use SSL to communicate back to LinkShare.

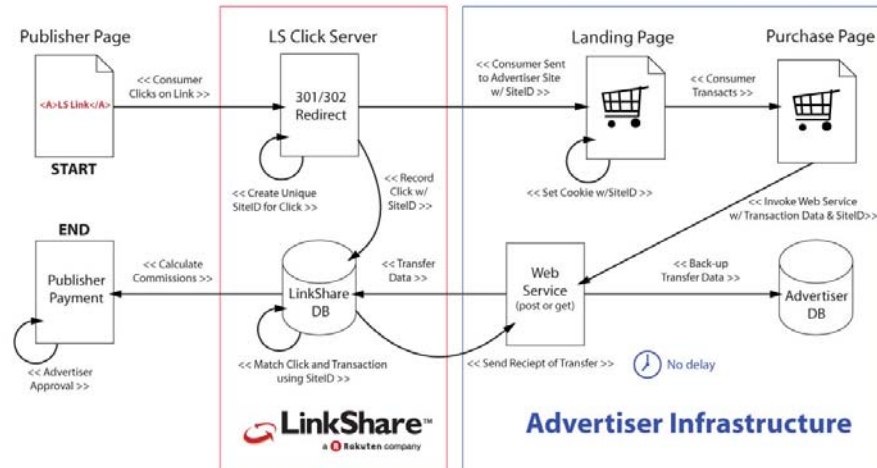
Upon receipt of a new LSTrans file, LinkShare will process the sales records inside and match the SiteID for each row to the clicks that generated them. Since the click data contain a record of what publisher drove the sale and the time of the click, the LinkShare system is able to determine who needs to be commissioned for sale and what commission rate should be use. The LSTrans file additionally contains data on what SKUs actually sold as a result of the click, which allows SKU-based tiering to differentially commission publisher sales based upon product.

The main strength of this tracking methodology lies in its enterprise approach. The LSTrans software can recover from most communication failures by storing files that it was unable to transmit, while additionally allowing the merchant in most cases to re-create data in case it does not transmit properly. The LSTrans process should allow merchants to have a high degree of confidence that the sales their affiliates sent to

their site are properly recorded, while providing them the ability to resolve most concerns by an affiliate that a given sale has not been tracked properly.

It has been our experience that installations of LSTrans should take about as long as an installation of other tracking solutions, however it is not uncommon to have delays by the advertiser's technology team as they become comfortable with the solution and the LSTrans script.

Web Service Tracking



Web Service Tracking

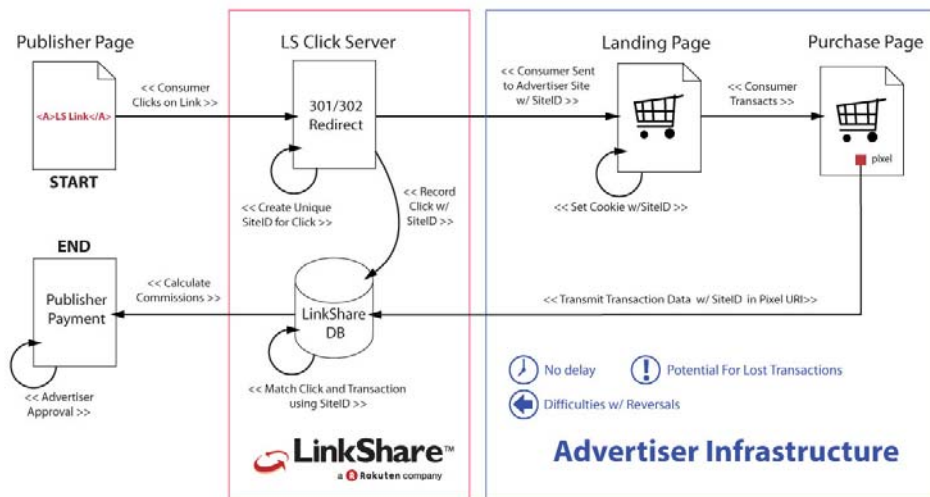
Our new web services tracking option is revolutionizing affiliate marketing sales tracking as we know it. These services combine the real-time tracking capabilities of browser-based solutions with the enterprise-level transaction control of LSTrans. They are the new standard for sales tracking.

For those who have not encountered them, a web service is software that allows the exchange of data between two machines via a standard web transfer protocol. For publisher sales tracking, a web service can transfer real-time the data for a single order at the moment the sale is confirmed rather than batching up a series of orders for later transmittal. Like LSTrans, consumers and their browsers will be unaware of this machine-to-machine call. As such, this tracking is completely transparent to the user and therefore cannot be blocked by browser settings or ad blocking technology like pixels, cookies, and JavaScript can.

The lifecycle of the publisher-driven transaction runs just like LSTrans until the moment of a completed sale. At this moment, the information about this sale including the merchant held SiteID are transmitted back to LinkShare via a web service call instead of being pooled up for transmission using an LSTrans file. It is requested that the advertiser redundantly store the web service transferred data in a database to allow recovery from failure and to have their own independent audit trail. Each tracking event ends with LinkShare returning a success code back to merchant to confirm proper reception of the data.

The web service data transfer can use either a GET or POST to send data back to LinkShare. The GET method is somewhat easier to implement than the POST given its use of URI parameters. The POST method requires the data to be transferred to be embedded into header to simulate a form submission by a web browser, which can allow more information to be transferred using a single call.

Pixel Tracking



Pixel Tracking

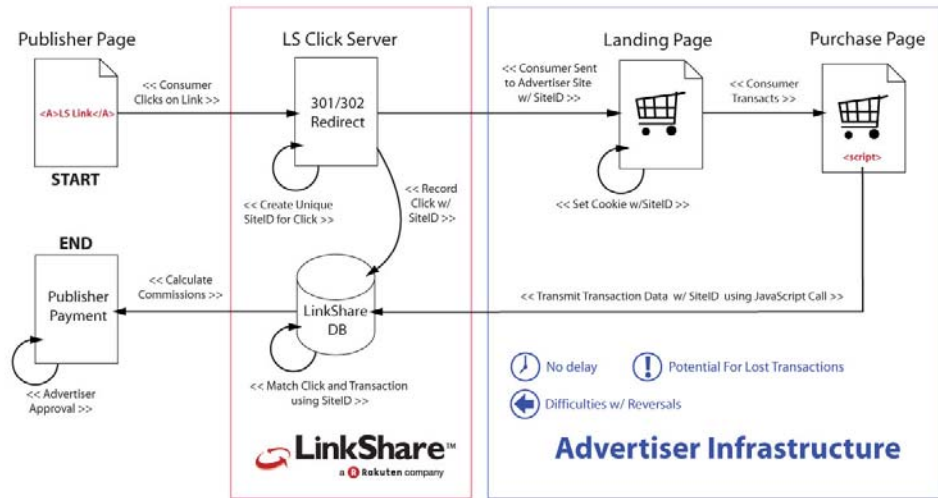
LinkShare now offers a pixel tracking option for those clients who may prefer this approach. The trade off for this choice over our LSTrans or Web Services offerings is a loss of enterprise tracking due to issues with a page delaying the load of the pixel image or pixel blocking technologies. Unlike LSTrans or Web Services Tracking, if a click fails to track, there is less the merchant can do to reconstruct the click and understand why and whether to commission the publisher if necessary.

The lifecycle of a pixel tracking transaction is identical to that of LSTrans until the consumer lands on the confirmation page for the sale. The advertiser at this point will place a 1 by 1 pixel beacon on the confirmation page whose URI reports back to LinkShare the SiteID of the click and sales data for the transaction.

The strengths of this method lie in its relative ease of implementation and real-time tracking capabilities. Unlike LSTrans, the commerce event will be tracked at the moment it occurs rather than waiting for a file to be generated. Lastly, many publishers like the idea of being able to see the tracking mechanism in the HTML source of the confirmation page rather than relying upon the merchant to do the tracking underneath the covers of their application server.

As already mentioned, the chief weakness of this method lies in the friable nature of using pixels on web pages to track consumer activity. Additionally, the use of URIs in a browser to transmit data places a 2k character limitation on what can be transmitted by a pixel, which can potentially make SKU reporting problematic on large shopping cart purchases. Lastly, the pixel methodology requires that cancellations be handled by a separate process, since an advertiser will be unable to reverse sales using this same methodology. Reversals need to be handled either through the use of an interface tool or using another tracking method.

JavaScript Tracking



JavaScript Tracking

JavaScript tracking uses a script-based URI call to pass the same information passed by pixel tracking to match consumers to LinkShare clicks. The lifecycle of the click is the same as pixel tracking except a browser script will be executed on the confirmation page in place of the pixel.

This tracking technology will allow real-time tracking with relative ease of implementation. As the blocking of 3rd party tracking pixels increases in browsers, the JavaScript option should improve its performance against the pixel tracking option, although this has not been empirically demonstrated yet.

The drawbacks of JavaScript tracking are largely shared with Pixel Tracking. Browsers will need to have JavaScript enabled for this method to work, although many e-commerce shopping carts need this feature to be enabled in order to submit a shopping cart. This option is not supported within Google Checkout, so merchants who use this Google offering will need to use LSTrans, pixels, or web services to track publishers for these sales.